

# Employment rate and predictors of return to work in European cancer survivors: a systematic review.

Sara Paltrinieri<sup>1</sup>, Elisa Mazzini<sup>1</sup>, Stefania Fugazzaro<sup>1</sup>, Martina Pellegrini<sup>1</sup>, Chiara Bassi<sup>1</sup>,  
Claudio Tedeschi<sup>1</sup>, Massimo Vicentini<sup>2</sup>, Stefania Costi<sup>1,2</sup>

<sup>1</sup>Local Health Authority – IRCCS of Reggio Emilia;  
<sup>2</sup>University of Modena and Reggio Emilia, Modena, Italy

## Background

Cancer incidence and survival are both increasing. Over 1/3 of cancer survivors (CSs) are in their working age<sup>1</sup>. CSs experience pain, fatigue, cognitive dysfunction, and mood disorders that may adversely affect social functioning<sup>2</sup>. Systematic reviews show a 64% employment rate for CSs, with high variability in different contexts (range 24% – 94%)<sup>3</sup>. We reviewed the recent literature on the employment rate of CSs in Europe, investigating the factors influencing their return to work (RTW).

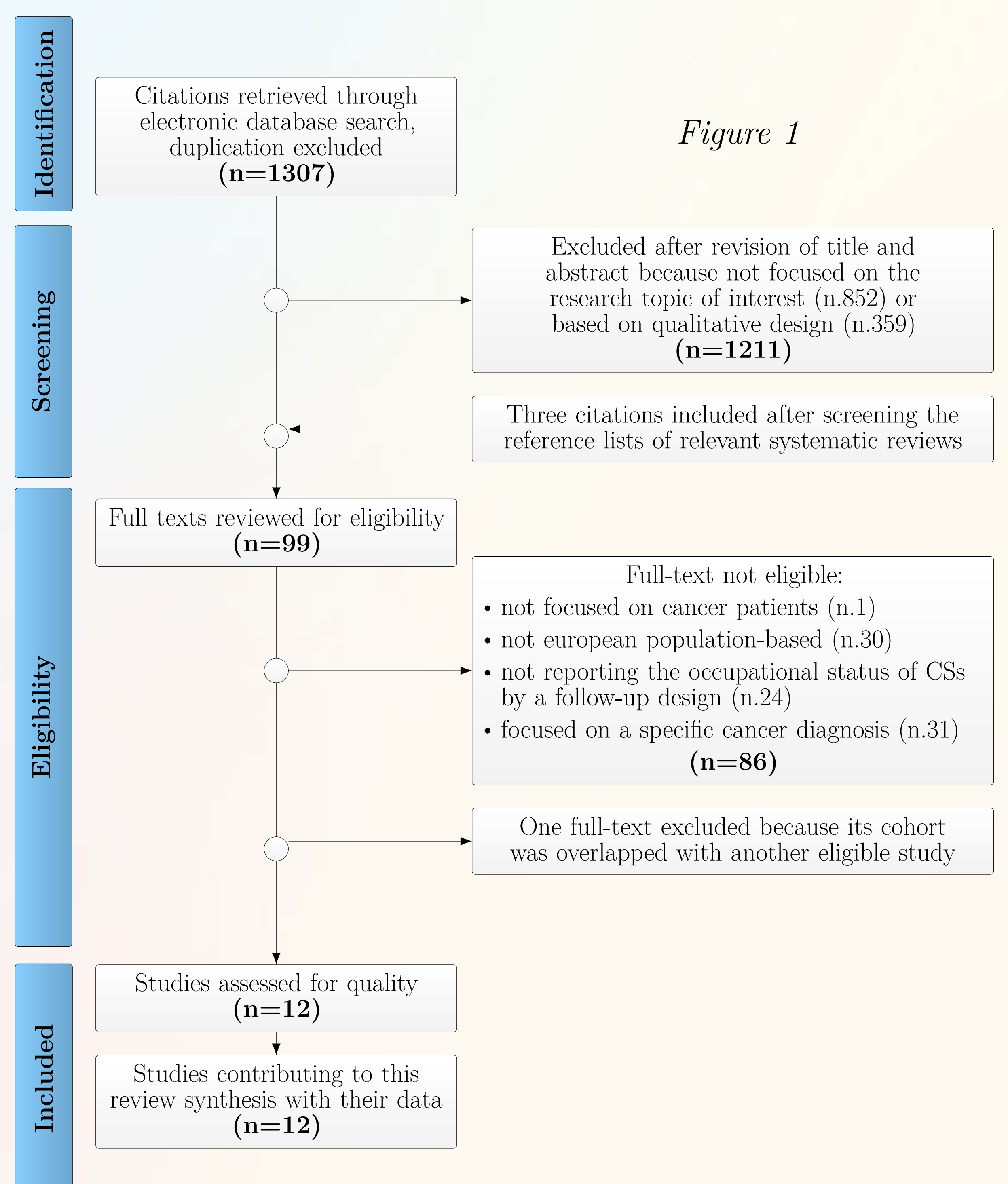
## Methods

Bibliographic searches were conducted in MEDLINE, CINAHL, EMBASE, PsycINFO, and the Cochrane Library (All Databases) from January 2010 to April 2017, with no language restrictions. Three independent researchers analyzed and critically evaluated each citation using the Critical Appraisal Skills Programme, 2017. European population-based studies were selected if included patients with cancer and assessed employment status by a follow-up study design. We excluded studies focusing on a specific cancer diagnosis. This study was supported by the Chamber of Commerce of Reggio Emilia, Fondazione GRADE Onlus, and Hospital IRCCS-ASMN of Reggio Emilia (Italy).

## Results

Twelve observational studies, conducted in the United Kingdom, France, the Netherlands, Denmark, Norway, Finland, and Iceland, were included (*Figure 1*). The cohorts investigated were diagnosed with cancer from 1987 to 2010 and the median follow-up was 2 years (range 0.2–23.4 years). The samples included individuals in their working age selected through cancer registries, occupational registries, health insurance schemes, or hospital departments. The size of the included samples varied from 280 to 46720 individuals; breast cancer was the most represented cancer (n. 7355), followed by genital and prostate (n. 4868), gastrointestinal (n. 1973), upper aerodigestive tract/lung (n. 1512), blood cancer (n. 1436), skin cancer (n. 1197) urological not prostate (n. 659), head and neck, including thyroid (n. 245), and unspecified sites (n. 1250).

RTW of CSs in their working age ranged from 39% to 77%. Among the individuals employed at the time of diagnosis, RTW fluctuated from 60% to 92%, the latter registered in a sample with good prognosis. Factors associated with RTW are shown in *Figure 2*: they embrace the crucial areas of personal features, work-related factors and cancer-related factors, and include some support strategies that facilitate reintegration to work. These findings represent the situation in Northern Europe and, only marginally, in Central Europe; Southern Europe is not at all represented.



## Positive factors

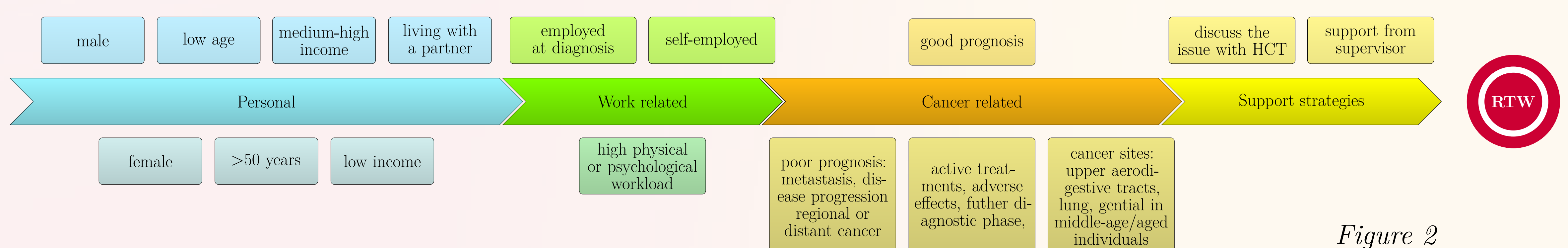


Figure 2

## Negative factors

## Conclusion

There is an urgent need for precise, up-to-date data collected in Southern and Central Europe to understand whether RTW is problematic in CSs and whether CSs require socio-rehabilitative interventions to mitigate the potential negative impact of cancer on individuals and society.